

**HIGH TORQUE BALLOON CATHETER POSSESSING MULTI-DIRECTIONAL
DEFLECTABILITY AND METHODS THEREOF**

ABSTRACT OF THE DISCLOSURE

A flexible catheter shaft with a balloon on the distal section suitable for inserting into a body of a patient comprising a deflectable, high torque transmission assembly of a slit tubular element that has either a plurality of rows of slits with anchors or at least one continuously spiraling slit on said slit tubular element and has sufficient bending and torque properties ensuring that a substantial fraction of the bending, rotational and displacement forces provided along said flexible catheter shaft are translated to bending, rotational and displacement forces at a distal end of said flexible catheter shaft, facilitating the placement of the catheter distal section and using the balloon for blocking the vessel ostium and injecting contrast medium through an open distal tip.